

User Manual

STORC DASHBOARD PROJECT

CD Jam

CSC 191 – FALL 2015 | 12/18/2015

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ABOUT

The Sustainability Technology Optimization Research Center (STORC) Dashboard Project was created by the CD Jam Software Development Team and sponsored by the Director of STORC, Michael Christensen. CD Jam was comprised of a team of undergraduate students majoring in Computer Science at California State University, Sacramento and who were enrolled in a two-semester senior project course in 2015. During this time Michael Christensen gave CD Jam requirements for the application so that they could produce the STORC Dashboard Project for STORC. This User Manual goes over how to install and use the product that was built by CD Jam.

Information on the Project

The STORC Dashboard Project is coded in ASP.net with C#, uses open source resources, and Microsoft SQL. Anybody who would like to continue to build on this application should use Microsoft Visual Studio in order to add more features to this website, since this is the software CD Jam used in the creation of this product. At this time though this project is only considered to be a tool for management since there is no user login. Please only allow trusted employees and volunteers to use the project in order not to lose data.

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INSTALLATION

In order to install the web application for STORC several requirements must be fulfilled. STORC and IRT must collaborate with John Jones, a member of CD Jam who is currently hosting the web server and database on a Microsoft Azure account. Together

they will find a location to house the web application and database, whether it be on another Microsoft Azure account or on an IRT virtual machine. Once everything has been configured the members of STORC will be able to access the website and start inserting data and creating widgets. All files needed in order to host the website and the web application files will be given to Dr. Christensen via a USB drive.

HOW TO USE THE STORC DASHBOARD PROJECT

All steps in this section assume that the user has navigated to the STORC Dashboard Project website and are on the homepage of the application.

Input Data

This section will cover where and how to submit inputted data into the database.

1. On the **Home** page click on the **Input Data** tab (Figure 1)



Figure 1: Input Data Tab

2. On the Input Data page click on the **Project Tabs** associated with the project to load the form for that project (Figure 2)



Figure 2: Project Tabs

Note: In this walkthrough the project tab that will be used is **Compost**

3. Some projects contain multiple input forms, so it may be required that a **Form Tab** to be selected in order to get to a specific form (Figure 3)

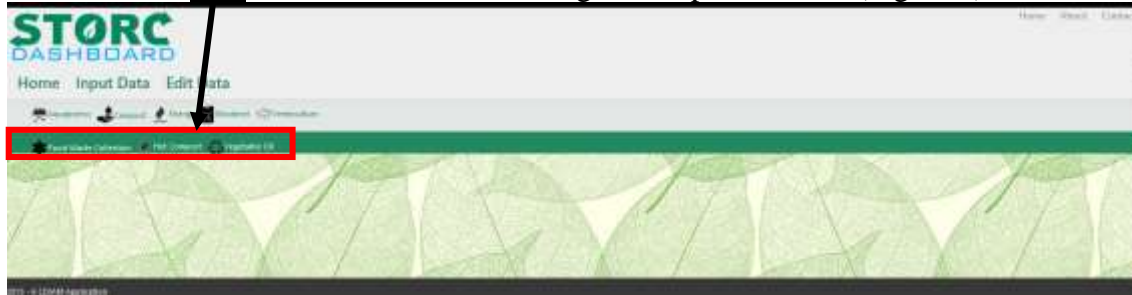


Figure 3: Form Tabs

Note: In this walkthrough the form tab that will be used is **Food Waste Collection**

4. After either clicking on a project tab or form tab the input form should then load and will look something like Figure 4

Figure 4: Input Form

5. Please ensure to fill in all required data in correctly and if there is an issue with the form an error message will appear like the one shown in Figure 5

Vendor Foodwaste Data Collection Form

There were errors on this page:

- A percentage value for coffee grounds is required
- Please pick a value for if trash in the food waste

Waste Received From: The Buzz/Biggrounds

Date: 12/10/2015

Weight: 23 lbs

Percentage Grains: 10 %

Percentage Fruit: 3 %

Percentage Vegetables: 1 %

Percentage Dairy: 2 %

Percentage Paper: 4 %

Percentage Coffee Grounds: %

Trash Present: %

Notes:

Reset Submit

Figure 5: Validation issues

- If data on the form is not correct and the user would like to clear the form click the **Reset** button (Figure 6)

Vendor Foodwaste Data Collection Form

There were errors on this page:

- A percentage value for coffee grounds is required
- Please pick a value for if trash in the food waste

Waste Received From: The Buzz/Biggrounds

Date: 12/10/2015

Weight: 23 lbs

Percentage Grains: 10 %

Percentage Fruit: 3 %

Percentage Vegetables: 1 %

Percentage Dairy: 2 %

Percentage Paper: 4 %

Percentage Coffee Grounds: %

Trash Present: %

Notes:

Reset Submit

Figure 6: Reset Button

7. Once all data has been correctly entered into the form click the **Submit** button and it will send the data to the database and clear the form (Figure 7)

Vendor Foodwaste Data Collection Form

Waste Received From: The Buzz/Recogrounds

Date: 12/10/2015

Weight: 45 kg

Percentage Grains: 10 %

Percentage Fruit: 10 %

Percentage Vegetables: 20 %

Percentage Dairy: 20 %

Percentage Paper: 20 %

Percentage Coffee Grounds: 20 %

Trash Present: Yes

Notes: Some plastic in the paper percentage

Reset Submit

Figure 7: Submit Data

8. Now that the data is sent to the database the user will be able to use the newly entered data to create a widget
9. If required, the user can enter another set of data for this project

Edit Data

This section will cover where and how to edit or delete data in the database.

1. On the **Home** page click on the **Edit Data** tab (Figure 8)



Figure 8: Edit Data

2. On the Edit Data page click on one of the **Project Tabs** (Figure 9)

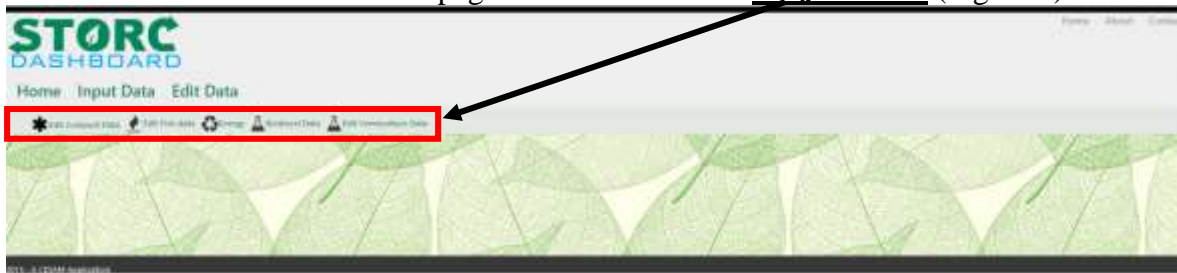


Figure 9: Edit Project Tabs

Note: This walkthrough uses the project tab associated with **Edit Compost Data**

3. Once a project tab is clicked all data in the database that is associated with that project is populate a table, as shown in Figure 10, which user can edit or delete entries from the database

	ID	date	weight	% Grains	% Fruit	% Veg	% Dairy	% Paper	% CoffeeGrounds	trash?	wasteType	Vendor	% Oil Pull
Edit Delete	119	12/17/2015 12:00:00 AM	29	10	8	10	20	10	-45	<input checked="" type="checkbox"/>	Foodwaste	Starbucks	
Edit Delete	118	12/15/2015 12:00:00 AM	2	10	10	10	10	20	40	<input checked="" type="checkbox"/>	Foodwaste	Java City	
Edit Delete	116	12/16/2015 12:00:00 AM	133	10	10	10	10	10	50	<input type="checkbox"/>	Foodwaste	Starbucks	
Edit Delete	113	12/16/2015 12:00:00 AM	4	20	10	20	10	20	20	<input type="checkbox"/>	Foodwaste	Roundhouse	
Edit Delete	112	12/16/2015 12:00:00 AM	3	20	20	20	20	10	10	<input type="checkbox"/>	Foodwaste	Spice	
Edit Delete	111	12/16/2015 12:00:00 AM	3	20	20	20	20	10	10	<input checked="" type="checkbox"/>	Foodwaste	The Buzz/Esogrounds	
Edit Delete	110	12/16/2015 12:00:00 AM	44	0	0	0	0			<input type="checkbox"/>	VegetableOil		00
Edit Delete	109	12/17/2015 12:00:00 AM	10	20	20	20	20	10	10	<input checked="" type="checkbox"/>	Foodwaste	The Buzz/Esogrounds	
Edit Delete	107	12/17/2015 12:00:00 AM	55	0	0	0	0			<input type="checkbox"/>	HrdCompost		
Edit Delete	106	12/17/2015 12:00:00 AM	12	20	20	20	20	10	10	<input type="checkbox"/>	Foodwaste	The Buzz/Esogrounds	

Figure 10: Project Data

4. To delete an entry within the database click on **Delete** (Figure 11)

	ID	date	weight	% Grains	% Fruit	% Veg	% Dairy	% Paper	% CoffeeGrounds	trash?	wasteType	Vendor	% Oil Pull
Delete	119	12/17/2015 12:00:00 AM	29	10	8	10	20	10	-45	<input checked="" type="checkbox"/>	Foodwaste	Starbucks	
Edit Delete	118	12/15/2015 12:00:00 AM	2	10	10	10	10	20	40	<input checked="" type="checkbox"/>	Foodwaste	Java City	
Edit Delete	116	12/16/2015 12:00:00 AM	133	10	10	10	10	10	50	<input type="checkbox"/>	Foodwaste	Starbucks	
Edit Delete	113	12/16/2015 12:00:00 AM	4	20	10	20	10	20	20	<input type="checkbox"/>	Foodwaste	Roundhouse	
Edit Delete	112	12/16/2015 12:00:00 AM	3	20	20	20	20	10	10	<input type="checkbox"/>	Foodwaste	Spice	
Edit Delete	111	12/16/2015 12:00:00 AM	3	20	20	20	20	10	10	<input checked="" type="checkbox"/>	Foodwaste	The Buzz/Esogrounds	
Edit Delete	110	12/16/2015 12:00:00 AM	44	0	0	0	0			<input type="checkbox"/>	VegetableOil		00
Edit Delete	109	12/17/2015 12:00:00 AM	10	20	20	20	20	10	10	<input checked="" type="checkbox"/>	Foodwaste	The Buzz/Esogrounds	
Edit Delete	107	12/17/2015 12:00:00 AM	55	0	0	0	0			<input type="checkbox"/>	HrdCompost		
Edit Delete	106	12/17/2015 12:00:00 AM	12	20	20	20	20	10	10	<input type="checkbox"/>	Foodwaste	The Buzz/Esogrounds	

Figure 11: Delete Entry

WARNING! Clicking on delete will remove a data entry without any warning prompts. Please ensure that you would like to delete this data, since upon deletion the data will be lost and cannot be recovered.

5. To edit an entry within the database click on **Edit** (Figure 12)



ID	Date	Weight	% Organic	% Fruit	% Veg	% Dairy	% Paper	% Coffee/Grounds	trash?	wasteType	Vendor	% Oil Full
Edit	110	12/15/2015 12:00:00 AM	2	10	10	10	20	10	40	Foodwaste	Starbucks	
Edit	111	12/15/2015 12:00:00 AM	2	10	10	10	20	10	40	Foodwaste	Starbucks	
Edit	112	12/16/2015 12:00:00 AM	4	20	10	20	10	20	20	Foodwaste	Starbucks	
Edit	113	12/16/2015 12:00:00 AM	4	20	10	20	10	20	20	Foodwaste	Starbucks	
Edit	114	12/16/2015 12:00:00 AM	3	20	20	20	20	10	10	Foodwaste	Starbucks	
Edit	115	12/16/2015 12:00:00 AM	44	0	0	0	0	0	0	Vegetable Oil	Starbucks	00
Edit	109	12/17/2015 12:00:00 AM	10	20	20	20	20	10	10	Foodwaste	The Buzz/Bongrounds	
Edit	107	12/17/2015 12:00:00 AM	55	0	0	0	0	0	0	HotCompost	The Buzz/Bongrounds	
Edit	106	12/17/2015 12:00:00 AM	12	20	20	20	20	10	10	Foodwaste	The Buzz/Bongrounds	

Figure 12: Edit

6. Once the edit button has been clicked the entry in the database will turn **Green** and enable the text boxes in that row (Figure 13)



ID	Date	Weight	% Organic	% Fruit	% Veg	% Dairy	% Paper	% Coffee/Grounds	trash?	wasteType	Vendor	% Oil Full
Edit	110	12/15/2015 12:00:00 AM	2	10	10	10	20	10	40	Foodwaste	Starbucks	
Edit	111	12/15/2015 12:00:00 AM	2	10	10	10	20	10	40	Foodwaste	Starbucks	
Edit	112	12/16/2015 12:00:00 AM	4	20	10	20	10	20	20	Foodwaste	Starbucks	
Edit	113	12/16/2015 12:00:00 AM	4	20	10	20	10	20	20	Foodwaste	Starbucks	
Edit	114	12/16/2015 12:00:00 AM	3	20	20	20	20	10	10	Foodwaste	Starbucks	
Edit	115	12/16/2015 12:00:00 AM	44	0	0	0	0	0	0	Vegetable Oil	Starbucks	00
Edit	109	12/17/2015 12:00:00 AM	10	20	20	20	20	10	10	Foodwaste	The Buzz/Bongrounds	
Edit	107	12/17/2015 12:00:00 AM	55	0	0	0	0	0	0	HotCompost	The Buzz/Bongrounds	
Edit	106	12/17/2015 12:00:00 AM	12	20	20	20	20	10	10	Foodwaste	The Buzz/Bongrounds	
Edit	105	12/17/2015 12:00:00 AM	12	20	20	20	20	10	10	Foodwaste	The Buzz/Bongrounds	

Figure 13: Edit Entry

7. If the users decides that they would no longer like to edit they can click on the **Cancel** button which exits out of edit mode (Figure 14)



ID	Date	Weight	% Organic	% Fruit	% Veg	% Dairy	% Paper	% Coffee/Grounds	trash?	wasteType	Vendor	% Oil Full
Edit	110	12/15/2015 12:00:00 AM	2	10	10	10	20	10	40	Foodwaste	Starbucks	
Edit	111	12/15/2015 12:00:00 AM	2	10	10	10	20	10	40	Foodwaste	Starbucks	
Edit	112	12/16/2015 12:00:00 AM	4	20	10	20	10	20	20	Foodwaste	Starbucks	
Edit	113	12/16/2015 12:00:00 AM	4	20	10	20	10	20	20	Foodwaste	Starbucks	
Edit	114	12/16/2015 12:00:00 AM	3	20	20	20	20	10	10	Foodwaste	Starbucks	
Edit	115	12/16/2015 12:00:00 AM	44	0	0	0	0	0	0	Vegetable Oil	Starbucks	00
Edit	109	12/17/2015 12:00:00 AM	10	20	20	20	20	10	10	Foodwaste	The Buzz/Bongrounds	
Edit	107	12/17/2015 12:00:00 AM	55	0	0	0	0	0	0	HotCompost	The Buzz/Bongrounds	
Edit	106	12/17/2015 12:00:00 AM	12	20	20	20	20	10	10	Foodwaste	The Buzz/Bongrounds	
Edit	105	12/17/2015 12:00:00 AM	12	20	20	20	20	10	10	Foodwaste	The Buzz/Bongrounds	

Figure 14: Cancel

8. If the user is satisfied with the edit to the data entry they will click the **Update** button and it will save the changes to the database (Figure 15)



ID	Date	Weight	% Organic	% Fruit	% Veg	% Dairy	% Paper	% Coffee/Grounds	trash?	wasteType	Vendor	% Oil Full
Edit	110	12/15/2015 12:00:00 AM	2	10	10	10	20	10	40	Foodwaste	Starbucks	
Edit	111	12/15/2015 12:00:00 AM	2	10	10	10	20	10	40	Foodwaste	Starbucks	
Edit	112	12/16/2015 12:00:00 AM	4	20	10	20	10	20	20	Foodwaste	Starbucks	
Edit	113	12/16/2015 12:00:00 AM	4	20	10	20	10	20	20	Foodwaste	Starbucks	
Edit	114	12/16/2015 12:00:00 AM	3	20	20	20	20	10	10	Foodwaste	Starbucks	
Edit	115	12/16/2015 12:00:00 AM	44	0	0	0	0	0	0	Vegetable Oil	Starbucks	00
Edit	109	12/17/2015 12:00:00 AM	10	20	20	20	20	10	10	Foodwaste	The Buzz/Bongrounds	
Edit	107	12/17/2015 12:00:00 AM	55	0	0	0	0	0	0	HotCompost	The Buzz/Bongrounds	
Edit	106	12/17/2015 12:00:00 AM	12	20	20	20	20	10	10	Foodwaste	The Buzz/Bongrounds	
Edit	105	12/17/2015 12:00:00 AM	12	20	20	20	20	10	10	Foodwaste	The Buzz/Bongrounds	

Figure 15: Update

9. Once **Cancel** or **Update** buttons are clicked the table will exit out of edit mode looking again like Figure 10

- To access older data the user can use the **Numbers** on the bottom of the table by clicking on a number it allows the user to access sets of older entries grouped in 10 (Figure 16)

	ID	date	Weight	% Grains	% Fruit	% Veg	% Dairy	% Paper	% CoffeeGrounds	trash?	wasteType	Vendor	% Oil Pall
Edit Delete	115	12/17/2015 12:00:00 AM	23	90	0	10	20	10	-85	<input checked="" type="checkbox"/>	Foodwaste	Starbucks	
Edit Delete	118	12/15/2015 12:00:00 AM	2	30	10	10	10	20	40	<input checked="" type="checkbox"/>	Foodwaste	Jama City	
Edit Delete	116	12/16/2015 12:00:00 AM	133	60	10	10	10	10	50	<input checked="" type="checkbox"/>	Foodwaste	Starbucks	
Edit Delete	113	12/16/2015 12:00:00 AM	4	20	10	20	10	20	20	<input checked="" type="checkbox"/>	Foodwaste	Reynoldsburg	
Edit Delete	112	12/16/2015 12:00:00 AM	9	20	20	20	20	10	30	<input checked="" type="checkbox"/>	Foodwaste	Spokane	
Edit Delete	111	12/16/2015 12:00:00 AM	8	20	30	20	30	10	10	<input checked="" type="checkbox"/>	Foodwaste	The Buzz/Boogrounds	
Edit Delete	110	12/16/2015 12:00:00 AM	44	0	0	0	0			<input checked="" type="checkbox"/>	VegetableOil		88
Edit Delete	109	12/17/2015 12:00:00 AM	12	20	20	20	20	10	10	<input checked="" type="checkbox"/>	Foodwaste	The Buzz/Boogrounds	
Edit Delete	107	12/17/2015 12:00:00 AM	55	0	0	0	0			<input checked="" type="checkbox"/>	HotCompost		
Edit Delete	106	12/17/2015 12:00:00 AM	15	20	20	20	20	10	10	<input checked="" type="checkbox"/>	Foodwaste	The Buzz/Boogrounds	

Figure 16: Older Entries

Widgets

This section will cover how to use add, delete, and edit functions of the widgets. **WARNING!** All widget position and charts will not be saved if the user navigates to another tab or if the web browser is closed. At this time it is advised to do all widget creating last after inserting data using the input webforms.

- When the application is launched it loads the **Home** tab which houses all of the widgets

Add

Learn how to add and create a chart on a widget.

- To add a widget to the Home tab you must **right-click** within the opaque white area
 - The best place to do this is on the left or right side of an outer widget see the outlined areas in Figure 17 for best locations



Figure 17: Areas to Right-Click

2. After right-clicking a menu will appear click on **Add Widget** (Figure 18)



Figure 18: Add Widget

3. Once **Add Widget** is clicked another widget will appear on the screen, as seen in Figure 19, to the first open spot in the grid for that widget



Figure 19: Widget

4. In order to create a chart on a widget from the **Select a Project** dropdown choose a project (Figure 20)



Figure 20: Select Project

Note: In this tutorial we are going to choose the **Compost** in the **Select a Project** dropdown. Each dropdown after this varies from project to project

so dropdown labels may be different depending on what project you select but the methodology is the same as Compost.

5. Chose a category from the **Select type of waste** dropdown (Figure 21)

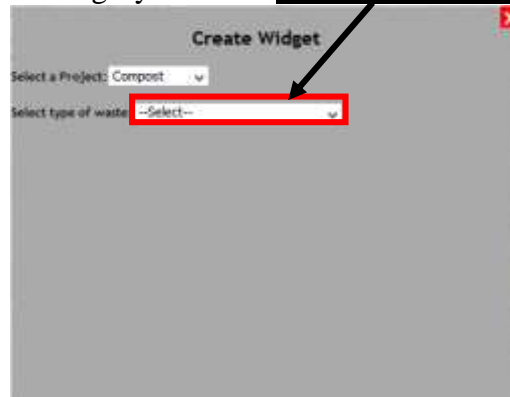
A screenshot of a web form titled "Create Widget". It has a close button (red X) in the top right corner. The form contains three dropdown menus. The first is labeled "Select a Project:" and has "Compost" selected. The second is labeled "Select type of waste:" and has "--Select--" selected; this dropdown is highlighted with a red rectangular box, and a black arrow points to it from the text "Select type of waste" in the step instruction above. The third dropdown is labeled "Select Vendor:" and has "--Select--" selected.

Figure 21: Select Type of Waste

6. Then select a category from **Select Vendor** dropdown (Figure 22)

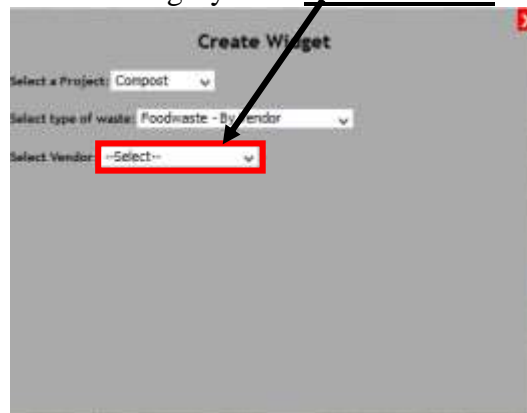
A screenshot of the "Create Widget" form. The "Select type of waste:" dropdown now shows "Foodwaste - By Vendor" selected. The "Select Vendor:" dropdown, which previously had "--Select--", is now highlighted with a red rectangular box, and a black arrow points to it from the text "Select Vendor" in the step instruction above.

Figure 22: Select Vendor

7. Choose a category in **Select the type of graph you would like to create** dropdown (Figure 23)

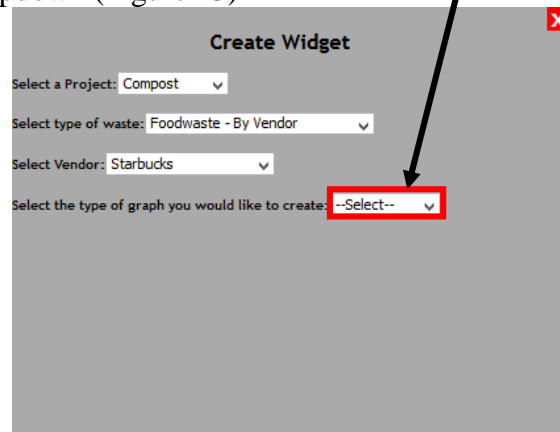
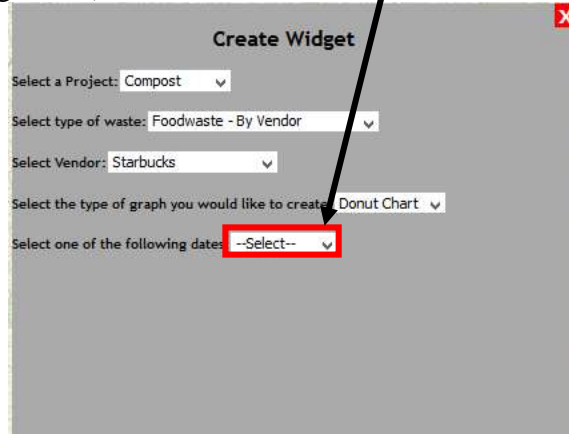
A screenshot of the "Create Widget" form. The "Select Vendor:" dropdown now shows "Starbucks" selected. The fourth dropdown, labeled "Select the type of graph you would like to create:", has "--Select--" selected and is highlighted with a red rectangular box. A black arrow points to it from the text "Select the type of graph you would like to create" in the step instruction above.

Figure 23: Select Graph

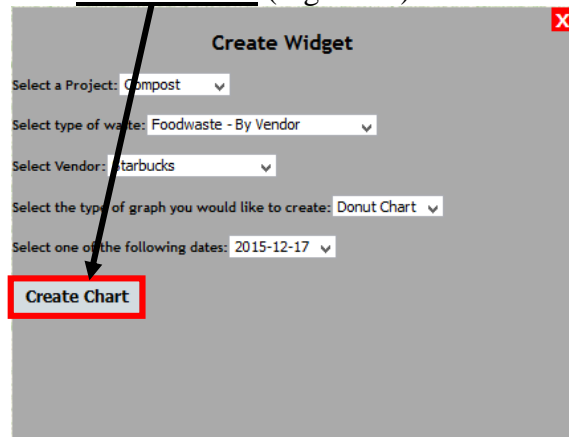
8. Then select a date in the **Select one of the following dates** dropdown (Figure 24)



The screenshot shows a 'Create Widget' form with the following fields: 'Select a Project:' with 'Compost' selected, 'Select type of waste:' with 'Foodwaste - By Vendor' selected, 'Select Vendor:' with 'Starbucks' selected, 'Select the type of graph you would like to create:' with 'Donut Chart' selected, and 'Select one of the following dates:' with '--Select--' selected. A red box highlights the date dropdown, and an arrow points from the text 'Select one of the following dates' in the instruction above to this dropdown.

Figure 24: Date

9. Click on **Create Chart** (Figure 25)



The screenshot shows the same 'Create Widget' form as Figure 24, but with the date dropdown now showing '2015-12-17'. A red box highlights the 'Create Chart' button at the bottom left, and an arrow points from the text 'Click on Create Chart' in the instruction above to this button.

Figure 25: Create Chart

10. A chart will then appear on the user's screen based on the selections made, shown in Figure 26

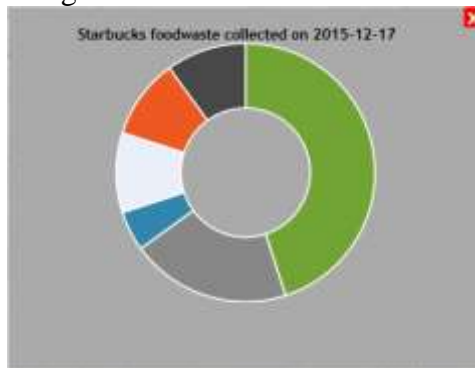


Figure 26: Chart

- a. Hovering over any section of the graph it will display its data and type as seen in Figure 27

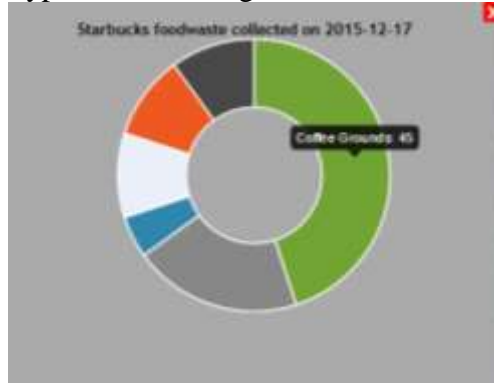


Figure 27: Chart Data

Delete

Learn the two way to delete a widget.

WARNING! Deleting a widget will remove it from the dashboard. In order to see that chart again the user will have to go through the process of adding a widget, as described in the Widget Add section.

1. To delete a widget click on the **Red X** located in the upper right hand corner (Figure 28)

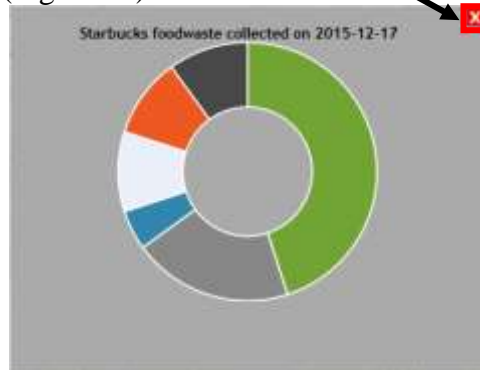


Figure 28: Red X

2. Or right-click on a widget and from the menu choose **Delete Widget** (Figure 29)

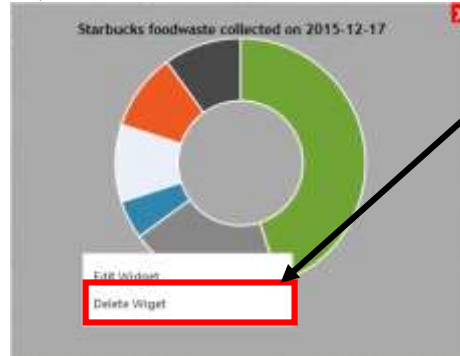


Figure 29: Delete Widget

3. Both methods will delete the widget off the Dashboard

Edit

Learn how to edit a chart within a widget.

1. Right-click on a widget and from the menu choose **Edit Widget** (Figure 30)



Figure 30: Edit Widget

2. The widget should then repopulate the dropdown boxes with the choices made previously (Figure 31)

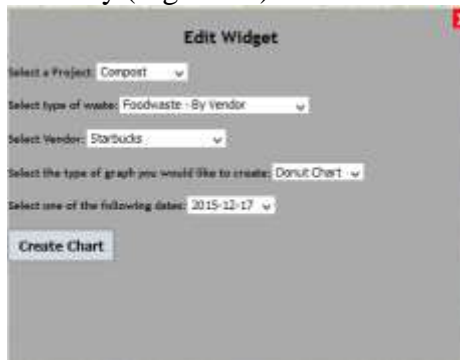


Figure 31: Customize Chart

3. To re-customize the widget please refer to under Widget the Add section steps 4 -10

Move

Learn how to move widget around the grid.

1. Go up to the **top middle part** of the widget (Figure 32) till you see the four point handler as in Figure 33

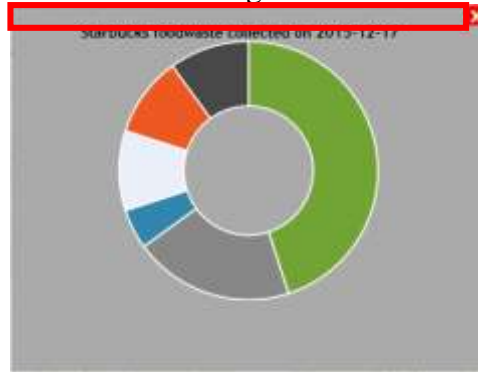


Figure 32: Move

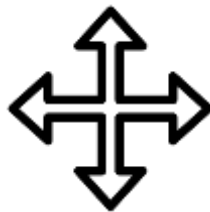


Figure 33: Four Point Handler

2. Once the icon appears, click and hold the left mouse button and drag the widget to any location in the grid
3. Let go of the left button on the mouse once the widget has moved to the desired location on the screen
4. This will move the widget to the nearest grid element on the dashboard

APPROVALS

By signing you agree that all conditions and commitments to the project are accurate to the best of your knowledge. I certify that the information in this User Manual is correct and the senior project group *CD Jam*. I also certify that I will follow and provide all needing requirements stated in this document and that I am willing to follow through with all conditions.

CD Jam Team members:

X

Cole Culler

X

David Grapentine
Project Lead

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Ashley Gregory

X

John Jones

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Michael Smith

Faculty Advisor:

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Ying Jin
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STORC Dashboard Sponsor:

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Sponsor